



Docket No.: 240932US0

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

GROUP: 1751

Douglas G PLACEK, et al.

SERIAL NO: 10/626,645

EXAMINER: KHAN, A

FILED: July 25, 2003

FOR: A FUNCTIONAL FLUID AND THE USE THEREOF

DECLARATION UNDER 37 C.F.R. 1.132

**COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313**

Sir:

Now comes Mr. Douglas Placek who deposes and states that:

- 1. I am a named inventor in the above-identified application.**
- 2. I am a graduate of Drexel University and received my B.S. in Chemical Engineering degree in the year 1984.**
- 3. I have been employed by RohMax Oil Additives since September 1999, and I have been conducting research in the field of lubrication and tribology for 22 years.**
- 4. I have reviewed and understand the contents of U.S. 2004/0092409 which was cited by the Office against the claims of the above-identified application.**
- 5. In order to demonstrate that a mineral oil-based functional fluid is unable to provide the fire resistance properties of the claimed invention, the following experiments were carried out by me or under my direct supervision and control.**
- 6. Liquid compositions were prepared from different base components including acrylate polymers and mineral oil. The acrylate polymers contain different amounts of monomers including MMA (methyl methacrylate), BMA (butyl methacrylate), LMA (lauryl**

methacrylate). Fire resistance testing was carried out under the U.K. National Coal Board Test 570 test. The results for various compositions are tabulated below.

Blends containing 15% PAMA polymer solids*																		
Sample	Diluent	MMA	BMA	LMA	IDMA	A	B	C	D	E	F	G	H	I	J	K	L	M
PA 7570	TiBP	20	40	40		15							15					
JAQ 485	none		100															
	100% oligomer																	
HF 848	Mineral oil	11		89					15					15				
PA 7948	TOP	35		65						15					15			
PA 7949	TOP	30		70							15					15		
TiBP-Triisobutyl Phosphate																		
TOP - Tri isooxy Phosphate																		
Exxon 100%P - Paraffinic Mineral Oil																		
Wick Flammability Test Result																		
(U.K. National Coal Board Test 570)																		
Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	

* All fluid test samples were designed to contain 15 weight percent polymer solids, with the balance being a selected base oil

Wick Flammability Test Result
(U.K. National Coal Board Test 570): 1" Burnt flame held against soaked fiberglass cloth for 30 seconds

Pass = Does not burn or self extinguishes in under 10 seconds

Fail = Burns continuously

Conclusions:

Mineral oil fluids containing PAMA (polyalkylnmethacrylate) polymers can not pass these industry standard fire resistance tests
TiBP based fluids containing PAMA polymers can pass these industry standard fire resistance tests
PAMA polymers based on BMA (butylmethacrylate) do not show unique fire resistance properties

Mineral oil fluids formulated with PAMA polymers containing BMA offer no fire resistance

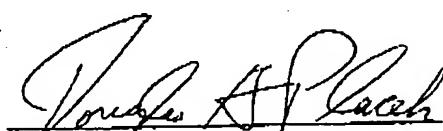
7. As is evident from the data of the table, compositions which contain a majority of a paraffinic mineral oil (i.e., Exxon 100LP) are unable to pass a well known industry standard flammability test. In contrast, when the compositions are based upon an oxygen-containing compound such as a phosphate, the compositions are able to pass the flammability tests.

8. It is my opinion that the data of the table demonstrate that a mineral oil-based functional fluid (i.e., a functional fluid containing at least 50% by weight of mineral oil) is unable to provide the fire resistance properties obtained when an oxygen-containing compound is used instead of a mineral oil.

9. I have reviewed and understand the scope of the claims in the above-identified application. The results of the Table demonstrate that for a wide variety of compositions including oxygen-containing compounds, significantly improved fire resistance may be obtained in comparison to mineral oil-based compositions.

10. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

11. Further deponent saith not.



Douglas Placek

5/1/06
Date

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TOP - Tri octyl Phosphate														
Exxon 1001P - Paraffinic Mineral Oil														
Wick Flammability Test Result (U.K. National Coal Board Test 570)						Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Pass
														Fail

* All fluid test samples were designed to contain 15 weight percent polymer solids, with the balance being a selected base oil

Wick Flammability Test Result

(U.K. National Coal Board Test 570): 1" Butane flame held against soaked fiberglass cloth for 30 seconds

Pass = Does not burn or self extinguishes in under 10 seconds

Fail = Burns continuously

Conclusions:

Mineral oil fluids containing PAMA (polyalkylmethacrylate) polymers can not pass these industry standard fire resistance tests
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